Open Literature Review Summary

Chemical Name: N/A

CAS No: N/A

MRID: 47800511

ECOTOX Record Number and Citation:

Babendreier, D., Kalberer, N., Romeis, J., Fluri, P., and F. Bigler. 2004. "Pollen consumption in honey bee larvae: a step forward in the risk assessment of transgenic plants." *Apidologie* 35: 293-300

Purpose of Review (DP Barcode or Litigation): Risk assessment

Date of Review: July 24, 2009

Summary of Study Findings:

In this field study, small queenright colonies of honeybees were kept in large field cages that only contained flowering maize plants as the sole source of pollen. Fully grown larvae were removed and dissected in order to analyze pollen consumption. The larvae were found to contain between 1720 and 2310 grains of pollen in their gut prior to defecation, which corresponds to 1.52-2.04 mg of pollen consumer per larva. The authors calculated that 86 mg of maize pollen would be needed to rear a single honeybee larva. The authors postulated that exposure to agrochemicals via pollen has been overestimated in regards to larval exposure.

Description of Use in Document (QUAL, QUAN, INV):

Supplemental/Invalid

Rationale for Use:

The study is scientifically sound and provides reliable and valuable information in regards to pollen consumption in bee larvae. However, the study only analyzes pollen intake of bee larvae, and does not test any chemicals for toxicity. Thus the study can provide useful background information regarding the toxic risk of certain chemicals via pollen consumption by providing baseline levels and the relevancy of dosages of the chemicals to actual ingestion by bees.

Limitations of Study:

Does not investigate toxic endpoints or test any chemicals.

Primary Reviewer:
David Schweer
Secondary Reviewer (required if study results are used quantitatively):
Christina deMariano